

REMARKS

By this Amendment, Applicants have canceled claims 1 and 9-11 without prejudice or disclaimer; amended claims 3-5, 7, 8, 13-15, 17, and 18; and added new claims 19-22. No new matter has been added. Claims 3-8 and 13-22 are pending in the application.

As an initial matter, Applicants would like to thank Examiner West for the courtesy and consideration extended to Applicants' representative during the telephone interview conducted on September 15, 2006. During the telephone interview, the following issues were discussed.

I. Claim Rejections under 35 U.S.C. § 103(a)

In the Office Action, the Examiner rejected claims 1, 7-11, 17, and 18 under 35 U.S.C. § 103(a) as being unpatentable over Gonyea et al. (U.S. Pat. App. Pub. No. US 2001/0032109) in view of Deguchi et al. (U.S. Patent No. 6,608,666); rejected claims 3, 4, 13, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Gonyea et al. in view of Deguchi et al. and Suyehira (U.S. Patent No. 6,497,161); rejected claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Gonyea et al. in view of Deguchi et al. and Bazarnik (U.S. Patent No. 4,404,641); and rejected claims 6 and 16 under 35 U.S.C. § 103(a) as being unpatentable over Gonyea et al. in view of Deguchi et al., Bazarnik, and Makitani (Japanese Pat. App. Pub. No. 2000-012412).

The only independent claims pending in the application prior to this Amendment were independent claims 1 and 11. Those claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gonyea et al. in view of Deguchi et al. As outlined

previously herein, Applicants have canceled independent claims 1 and 11 without prejudice or disclaimer, and have added new independent claims 19 and 20. To the extent that the Examiner considers rejecting new independent claims 19 and 20 based on the Gonyea et al. and Deguchi et al. references, as pointed out during the telephone interview, Applicants respectfully submit that those references, taken either individually or in combination, fail to disclose or suggest all of the subject matter recited in each of new independent claims 19 and 20, as will be explained in more detail below.

A. New Independent Claim 19

Applicants' new independent claim 19 is directed to a part maintenance system for maintaining at least one part constituting a portion of a semiconductor processing system. The part maintenance system includes at least one semiconductor processing system. The at least one semiconductor processing system includes a counter configured to count a value corresponding to operating conditions of the part. The part maintenance system also includes a factory-side system. The factory-side system includes a factory-side server connected to the at least one semiconductor processing system via a first private communication network. The factory-side server includes a preset means for storing at least two stage limit value levels corresponding to at least one of a predetermined allowable operation time limit and a predetermined number of operations of the part, a measuring means for measuring at least one of an actual operation time and a number of actual operations of the part, and a maintenance judging means for judging operation conditions associated with the part by comparing at least one of the actual operation time and the number of actual operations of the part

with at least one of the predetermined allowable operation time limit and the predetermined number of operations of the part to determine whether an order processing request for the part is desired. The factory-side system further includes a factory-side sending/receiving means connected to the factory-side server via the first private communication network.

The part maintenance system also includes a vendor-side system, including a vendor-side sending/receiving means connected to the factory-side sending/receiving means via a public communication network, and a vendor-side server connected to the vendor-side sending/receiving means via a second private communication network. The vendor-side server includes a part order processing means for processing an order of the part corresponding to the order processing request of the part.

The factory-side sending/receiving means includes a firewall configured to inhibit unauthorized transfer of data between the factory-side server and the public communication network. The vendor-side sending/receiving means includes a firewall configured to inhibit unauthorized transfer of data between the vendor-side server and the public communication network. The value counted by the counter is communicated to the factory-side server via the first private communication network. The measuring means is configured to measure at least one of the actual operation time and the number of actual operations of the part based on the value counted by the counter. The maintenance judging means compares at least one of the actual operation time and the number of actual operations of the part to a first stage limit value level and a second stage limit value level, and if the at least one of the actual operation time and the number of actual operations of the part is at least equal to the first stage limit value

level, the maintenance judging means generates a part ordering processing request, and if the at least one of the actual operation time and the number of actual operations of the part is at least equal to the second stage limit value level, the maintenance judging means carries out a notice processing.

The factory-side sending/receiving means is configured to send the order processing request via the public communication network to the vendor-side sending/receiving means. The firewall of the factory-side sending/receiving means and the firewall of the vendor-side sending/receiving means inhibit unauthorized transfer of data from the factory-side server and the vendor-side server, respectively. The vendor-side sending/receiving means is configured to receive the order processing request via the public communication network.

The Gonyea et al. and Deguchi et al. references, taken individually or in combination, fail to disclose or suggest all of the subject matter recited in Applicants' new independent claim 19. For example, neither of those references disclose or suggest a part maintenance system for maintaining at least one part constituting a portion of a semiconductor processing system, including at least the following subject matter:

- at least one semiconductor processing system;

- a factory-side system comprising:

- a factory-side server connected to the at least one semiconductor processing system via a first private communication network, and

- a factory-side sending/receiving means connected to the factory-side server via the first private communication network; and

a vendor-side system comprising:

a vendor-side sending/receiving means connected to the factory-side sending/receiving means via a public communication network, and

a vendor-side server connected to the vendor-side sending/receiving means via a second private communication network, the vendor-side server comprising a part order processing means for processing an order of the part corresponding to the order processing request of the part,

wherein the factory-side sending/receiving means comprises a firewall configured to inhibit unauthorized transfer of data between the factory-side server and the public communication network,

wherein the vendor-side sending/receiving means comprises a firewall configured to inhibit unauthorized transfer of data between the vendor-side server and the public communication network, and

wherein the vendor-side sending/receiving means is configured to receive the order processing request via the public communication network.

The Gonyea et al. and Deguchi et al. references do not disclose or suggest at least that subject matter recited in independent claim 19. As discussed during the interview, the Gonyea et al. reference does not disclose a part maintenance system for maintaining at least one part constituting a semiconductor processing system, as recited in independent claim 19. Rather, Gonyea et al. discloses a system and method for predicting the timing and costs of future service events. (Abstract.) A scheduler determines a list of future service events for the product. (Id.) A simulator simulates each of the listed future service events for the product and predicts the costs associated

with the events. (Id.) The list of the future service events and the total of the predicted costs are aggregated into a prediction that may be used in offering long term service agreements to maintain the product. (Id.) Thus, Gonyea et al. does not disclose a system for performing any maintenance. Gonyea et al. merely discloses a system and method for predicting maintenance costs that might be accrued during the life of a service contract.

In addition to Gonyea et al.'s disclosure being limited to predicting maintenance costs rather than maintaining a part, Gonyea et al. does not disclose Applicants' claimed factory-side and vendor-side systems. Further, Gonyea et al. does not disclose a factory-side server connected to at least one semiconductor processing system via a first private communication network, a factory-side sending/receiving means connected to the factory-side server via the first private communication network, and a vendor-side sending/receiving means connected to the factory-side sending/receiving means via a public communication network, wherein the factory-side and vendor-side sending/receiving means each include a firewall configured to inhibit unauthorized transfer of data from the factory-side server and the vendor-side server to the public communication network. The Gonyea et al. reference does not disclose such subject matter at least because Gonyea et al.'s system and method for predicting maintenance costs does not involve communication between a factory side and a vendor side. Applicants' recited part maintenance system may inhibit undesired transfer of information relating to technology and know-how to a vendor side. Gonyea et al. does not include any disclosure relating to this subject matter recited in Applicants' new independent claim 19.

Moreover, an artisan skilled in Gonyea et al.'s field relating to predicting maintenance costs would not look to Deguchi et al.'s disclosure relating to an exposure apparatus maintenance method in order to modify Gonyea et al.'s system and method for predicting maintenance costs at least because Gonyea et al. is not concerned with providing maintenance. Rather, Gonyea et al. is concerned with how to predict maintenance costs. Therefore, regardless of what Deguchi et al. discloses with respect to an exposure apparatus maintenance method, an artisan skilled in Gonyea et al.'s field of systems and methods for predicting maintenance costs would not look to Deguchi et al. to modify the Gonyea et al. systems and methods. For at least this reason, the Deguchi et al. reference does not overcome the deficiencies of Gonyea et al.

For at least the above-outlined reasons, the Gonyea et al. and Deguchi et al. references, regardless of whether they are viewed individually or in combination, fail to disclose or suggest all of the subject matter recited in Applicants' new independent claim 19. Therefore, Applicants' new independent claim 19 is patentably distinguishable from those references.

B. New Independent Claim 20

Applicants' new independent claim 20 is directed to a part maintenance method for maintaining at least one part constituting a portion of a semiconductor processing system. The method includes counting a value corresponding to operating conditions of the part of the semiconductor processing system and storing at least two stage limit value levels corresponding to at least one of a predetermined allowable operation time

limit and a predetermined number of operations of the part via a factory-side system comprising a factory-side server connected to the semiconductor processing system via a first private communication network. The method further includes measuring at least one of an actual operation time and a number of actual operations of the part via a measuring means. The method also includes judging operation conditions associated with the part by comparing at least one of the actual operation time and the number of actual operations of the part with at least one of the predetermined allowable operation time limit and the predetermined number of operations of the part to determine whether an order processing request for the part is desired via a maintenance judging means of the factory-side system.

The method further includes connecting a factory-side sending/receiving means to a factory-side server via the first private communication network and connecting a vendor-side sending/receiving means of a vendor-side system to the factory-side sending/receiving means via a public communication network. The method also includes processing an order of the part corresponding to the order processing request of the part via a part order processing means of a vendor-side server connected to the vendor-side sending/receiving means via a second private communication network. The method further includes inhibiting unauthorized transfer of data between the factory-side server and the public communication network via a firewall associated with the factory-side sending/receiving means and inhibiting unauthorized transfer of data between the vendor-side server and the public communication network via a firewall associated with the vendor-side sending/receiving means. The method also includes communicating the value counted by a counter to the factory-side server via the first

private communication network and measuring at least one of the actual operation time and the number of actual operations of the part based on the value counted by the counter.

The method further includes comparing at least one of the actual operation time and the number of actual operations of the part to a first stage limit value level and a second stage limit value level, and if the at least one of the actual operation time and the number of actual operations of the part is at least equal to the first stage limit value level, generating a part ordering processing request, and if the at least one of the actual operation time and the number of actual operations of the part is at least equal to the second stage limit value level, carrying out a notice processing. The method also includes sending the order processing request via the public communication network to the vendor-side sending/receiving means via the factory-side sending/receiving means and inhibiting unauthorized transfer of data from the factory-side server and the vendor-side server via the firewall of the factory-side sending/receiving means and the firewall of the vendor-side sending/receiving means, respectively.

For reasons at least similar to the reasons outlined previously herein with respect to new independent claim 19, the Gonyea et al. and Deguchi et al. references, regardless of whether they are viewed individually or in combination, fail to disclose or suggest all of the subject matter recited in Applicants' new independent claim 20. Therefore, Applicants' new independent claim 20 is patentably distinguishable from those references.

II. Conclusion

For at least the reasons set forth above, new independent claims 19 and 20 should be allowable. Dependent claims 3-8, 13-18, and new dependent claims 21 and 22 depend from new independent claims 19 and 20. Consequently, those dependent claims should be allowable for at least the same reasons new independent claims 19 and 20 are allowable.

Applicants respectfully request the reconsideration of this application, the withdrawal of the outstanding claim rejections, and the allowance of claims 3-8 and 13-22.

If the Examiner believes that a telephone conversation might advance prosecution, the Examiner is cordially invited to call Applicants' representative at (571) 203-2739.


Applicants respectfully note that the Office Action contains a number assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicants respectfully decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 6-0916.

Respectfully submitted,

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